



COURSE SYLLABUS

CONSTRUCTION TECHNOLOGY I

7130 Principles of Construction Trades
7123 Construction Trades: General Carpentry
7122 Construction Trades: Framing & Finishing
Fall 2022

PROGRAM TITLE: Construction Technology I

DOE CODE: See above

RECOMMENDED GRADE LEVELS: 10, 11, 12

PREREQUISITES: None

HIGH SCHOOL CREDITS: 3 per semester (6 total per school year)

ELECTIVE INFORMATION: Counts as a Directed Elective or Elective for all diplomas

HOW WCC CAN HELP MEET GRADUATION PATHWAYS:

Pathway 1

CTE elective high school credits
Technical Honors Diploma

Pathway 2

Work-Based Learning

Pathway 3

Technical honors diploma
Industry Certification
2 Advanced CTE Courses
Dual credits

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PROGRAM DESCRIPTION: Construction Technology I focuses on classroom and lab experiences involving the formation, installation, maintenance, and repair of buildings, homes, and other structures. A history of construction, with an emphasis on future trends and career options, is also covered. This program provides instruction in reading technical drawings and transforming those drawings into physical structures. The relationship of views and details, interpretation of dimension, transposing scale, tolerance, electrical symbols, sections, materials list, architectural plans, geometric construction, three dimensional drawing techniques, and sketching are presented as well as elementary aspects of residential design and site work. Students examine the design and construction of floor and wall systems and develop layout and floor construction skills. Blueprints and other professional planning documents are also covered. Students will develop an understanding and interpretation of the Indiana Residential Code for one and two-family dwellings and safety practices including OSHA's safety & health standards for the construction industry.

MAJOR LEARNING OBJECTIVES:

1. Integrate basic shop and workplace safety concepts into classroom activities and projects.
2. Utilize the appropriate hand, power, and stationary tools to complete various components of a building project.
3. Interpret data from plans, specifications, and codes to construct various structures.
4. Interpret residential and light commercial construction blueprints to construct structures.
5. Evaluate quantities and strength of concrete and masonry materials to perform floor and wall installations.
6. Construct floor framing as dictated by local, state, or federal regulations.
7. Construct wall framing as dictated by local, state, or federal regulations.
8. Apply concepts and basic skills in practical residential construction projects to layout a stairway.
9. Establish communication skills to properly identify ideas and concepts in floor and wall layout construction.

REQUIRED TEXT/CURRICULUM MATERIALS:

- Carpentry; Cengage Learning
- One Trade, Many Careers; Carpenters International Training Fund
- Project Book #1; Carpenters International Training Fund
- CareerSafe Online System

INDUSTRY CERTIFICATION AVAILABLE:

OSHA 10-Hour Safety Certification – Construction Industry
Testing required. Fees may apply.

NCCER (National Center for Construction Education and Research) Core
Testing required. Fees may apply.

DUAL CREDITS AVAILABLE:

BCTI 100 Introduction to Construction Technology
Ivy Tech 3 credits

BCTI 101 Introduction to Carpentry, Part 1
Ivy Tech 3 credits

BCTI 102 Introduction to Carpentry, Part 2
Ivy Tech 3 credits

METHODS OF INSTRUCTIONAL DELIVERY:

This course will be delivered using a variety of delivery methods. Lecture, class discussion, lab work, and individual and group exercises and activities will be used to deliver the class material.

EVALUATION METHODS:

- Classroom work
- Lab work
- Dual credit course projects and exams
- Certification projects and exams
- Participation and attendance

GRADING CRITERIA:

Assignments are divided into three categories: Classwork (40%), Projects/Assessments (40%), and Work Ethic (20%). Work Ethic includes daily participation and engagement in the class.

GRADING SCALE:

A+ 99-100%	C+ 78-79%
A 92-98%	C 72-77%
A- 90-91%	C- 70-71%
B+ 88-89%	D+ 68-69%
B 82-87%	D 62-67%
B- 80-81%	D- 60-61%
	F 59% and below

ATTENDANCE AND DISCIPLINE:

WCC attendance and discipline policies will be followed as detailed in the Student Handbook.

REQUIRED CONSUMABLE MATERIALS AND EQUIPMENT:

- Student kit